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RENT AND PRICE: "ALTERNATIVE USE" AND "SCARCITY VALUE"

SUMMARY

I. The "alternative use" idea, 119. — A value or price notion, 120. — Assumes distinct land-use groups and margins, 121. — II. Its alternative-utility aspect, 121. — Not significant as a long-time factor, 122. — Limited significance as a short-time factor, 123. — Classification of land utilities, 124. — III. The alternative-supply aspect, 126. — Limitations, general and particular, 126. — Costs, 127. — Return to value view-point and *net* utility, 128. — Effect of unequal wealth distribution, 129. — IV. The relation of "alternative uses" to rent, 130. — Not causal or determinative, 130. — Some practical considerations, 131. — V. Mill's treatment of "scarcity value" and rent, 132. — Overlooks the significance of the intensive margin, 135. — Loose use of terms, 137.

THE following paper is the result of an examination of those cases in which, according to J. S. Mill, prices are in part determined by rent payments. In his *Principles*¹ Mill sums up the relation of rent to price as follows: —

"Rent is not an element in the cost of production of the commodity which yields it; except in the cases (rather conceivable than actually existing) in which it results from and represents a scarcity value. But when land capable of yielding rent in agriculture is applied to some other purpose, the rent which it would have yielded is an element in the cost of production of the commodity which it is employed to produce."

I

Mill's statement that, in case land capable of yielding a rent in agriculture is put to some other use, its rent will become an element in cost of production in the new use, — or, in other words, will

¹ Book III, ch. vi, §9.

enter into the price of the commodity it is then employed to produce, — opens up the whole question of the relation of so-called alternative uses to the theory of rent. In his statement there is a modification of the bald classical doctrine of rent as put by Ricardo, the full significance of which Mill himself probably did not realize, and which has been brought out by such writers as Jevons, Hobson,¹ and Patten. The concise statement of the limitation would be as follows: land exists of different grades; the statement that rent does not enter into price holds of necessity only for one class of product raised on one grade of land; the price of products raised on lands that have been put to the more productive of two alternative uses is in part a positive or “specific” rent.

It is desirable to examine this newer doctrine more fully and critically than has, to the writer’s knowledge, yet been done. In such an examination two questions at once arise: (1) What are alternative uses and to what extent do they exist? (2) Do they give rise to “positive” or “intra-marginal” rents, — rents which *are* “an element of the cost of production”?

1. It must be observed at once that an alternative “use” is a price or value idea, — it assumes a price medium. It really connotes two factors, supply limitation and utility. It is desirable to separate the two, and discuss first the *alternative-utility* phase of the *alternative-use* idea.

As furnishing something of a key to the inquiry it may be suggested in advance, also, that if alterna-

¹ *Economics of Distribution*, p. 120 “What really invalidates the Ricardian treatment is the fact that most land in use has several alternative uses or can contribute toward several different supplies.

tive uses are to have any bearing upon the rent-price question it must be through alternative margins,¹ that is, through the existence of distinct margins for distinct land-use groups. If these do not exist, if all are reduceable to a common margin, mutually determined for the various uses, then there is no place for positive intra-marginal rents. That part of a land supply which has an alternative use can not be said to determine rent if its only claim to that distinction be such a use; for that would but throw one back upon the question, what determines the rent in that alternative use ?

II

As the term "alternative use" is commonly employed it means that any unit of land which can produce wheat, corn, cotton, cattle, manufactures, has as many alternatives as products; and a typical conclusion is that "the rent of land for agricultural purposes must be counted as a part of the cost of the product of a market garden."² To the writer this statement of the case seems superficial, in that it overlooks the elementary facts that the essence of production is utility creation and that in consumption men tend to equalize the marginal utilities of things consumed.

Let perfect mobility be assumed; also, a uniformity in quality and intensity of wants. In short, assume a static state and a problem on the demand side

¹ The marginal unit is, of course, not necessarily the point of determination. This point is in the unit which will be the first to cease producing in the particular use under consideration. It may be above the marginal one if it has some effective alternative. It will be the one which has the most attractive alternative relative to its productiveness in the given use, it will be the worst unit which has the best alternative.

² Johnson, *Rent in Modern Economic Theory*, p. 86.

in normal value. Then remember that the end of production is the satisfaction of wants and desires: that what land produces may all be reduced to terms of the common denominator, utility. Then what constitutes the rent of land is the productivity of land in the satisfaction of wants, *whatever be the concrete medium*.

From this point of view the above conception of alternative use, loses significance in so far as it means alternative utility. It is not necessary to assume that all land produces wheat in order to bring about a single absolute margin. If the element of utility, want-satisfying power, inherent in all economic goods, be considered the essential underlying the form, a similar result is obtained.

So far land has been discussed as yielding general undifferentiated utility. With all disturbing and retarding conditions removed this would be sufficient. We must, however, turn to the short-time working out of these things in a dynamic society, to a problem in market value. Here we have to reflect that man's wants are — immediately — for food, for shelter, for standing room, and for pleasure-giving things; and, on the other hand, land furnishes fertility, location, mass, beauty. Thus it would seem logical to recognize these few utilities, at least, as fundamental in any analysis based on a recognition of the fact that in a dynamic society the ultimate essential works out slowly: that competition, mobility, knowledge, are not perfect; and that wants lie in different planes, so to speak, varying in their urgency and the means for their satisfaction. And on the basis of such an analysis certain land-utility uses, not immediately competitive, may be recognized, each having its own margin.

The meaning of this will become clearer if we return to Mill's case. From the statement that land capable of yielding a rent in agriculture may yield a rent when put to some other use, and that this will enter into the price of commodities resulting from the new use, it might seem but a short step to the doctrine of positive, marginal rents within purely agricultural uses. Between grazing and market gardening there is nearly as great a difference in externals as there is between market gardening and residence use. But Mill does not take this step nor draw conclusions from superficial distinctions. In addition to the general statement given above, he says :¹ "Land is used for other purposes than agriculture, especially for residence; and when so used yields a rent, determined by principles similar to those already laid down. The ground rent of a building, and the rent of a garden or park attached to it, will not be less than the rent which the same land would afford in agriculture: but it may be greater than this, to an indefinite amount. . . ." Sites desirable for their convenience, he says, have their rents determined by the ordinary laws of rent ; but those of remarkable beauty are "at a scarcity value." The only case considered by him, then, in which the existence of an alternative use may allow rent to enter into the determination of price, exists when agricultural land is applied to uses other than agriculture. Beside residence sites, which he evidently deems the chief instance of the phenomenon, he mentions wharfs, docks, harbor room, water-power, "and many other privileges."

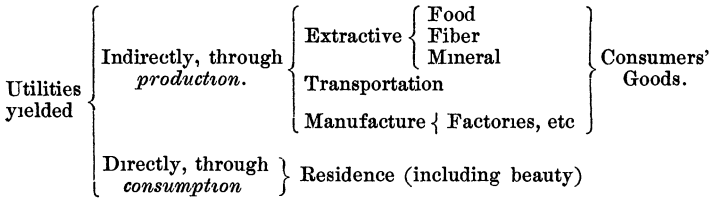
Thus Mill gives the principle of alternative use but a narrow scope as compared with the treatment

¹ Book III, ch. v, §2.

of some later writers; he does not divide lands into numerous use groups: he does not consider lands producing corn and lands producing wheat as belonging to distinct alternative uses, and having separate margins. He considers cases in which the alternative-utility use is — immediately at least — of a different order, in which land passes from the production of one utility to another fundamentally distinct. The cases he mentions represent a transfer from agriculture to a use in which desirability for residence as determined by beauty and convenience of location is the basis. This point is of no little significance; for, where units of land produce in such manner as to satisfy wants of the same order — where the consumers' goods, to the production of which land contributes, may be substituted — a problem arises which differs materially from the case that Mill considers. Residence use, harbor room, and dock space do not satisfy a man's hunger. The utilities of a building lot and of a corn field do not come to the same market. So far as market values are concerned, a logical recognition of the capability of land areas to produce different orders of utilities has some significance, — tho, as will be seen, not that assigned by Mill, Jevons, or Hobson.

Thus it may be logical to divide land into several non-competing use groups, and to distinguish as many separate margins. In one group place all lands which yield utility through extractive production, notably agricultural land. In a second group place such lands as owe their utility to their power to satisfy wants for building sites. These fundamental groups might be subdivided: agricultural lands being composed of food-producing, building-material-producing, and fiber-producing lands; build-

ing lands of (1) lands for mere residence, (2) lands valued for convenience or beauty of situation, and (3) transportation and factory lands. The rents of these non-competing groups of land may be measured from separate margins. On the basis of this analysis a logical classification of the lands of a society might be given as follows:



In the long run, lands whose utilities are yielded indirectly through production are brought into relation with lands whose utilities are yielded directly for consumption through consumers' goods in the shape of food products, clothes, and the like. But in short-time periods the utilities may be distinct.

Here a word should be added concerning terminology. Properly speaking, lands within a competitive utility group are not subject to alternative use within that group. They yield the same kind of utility, they have complementary utilities, but not in any significant sense *alternative* ones. These words stand for different ideas and it may be that confusion in their use has confounded thought.

From the economic standpoint, "alternative" has a "short-time" meaning, and should be applied when land in one group may be put to another and a distinct use in another group—as where agricultural land is used for residence. And it should be borne in mind that, economically speaking, there is no alternative use unless the net utility produced in one

use equals the net utility yielded in the other; for, unless the price of the produce in the one use at least equals that in the other, the land will not be put to a different use.

III

It is necessary now to turn to the supply-limitation element in alternative uses. The question becomes one purely of supply, — of pounds, bushels, acres. If possible, it will be well to keep clear of price and value ideas for a moment, thinking only of quantities of want-satisfying power. The existence of limits, general and particular, to the supply of land utilities is the salient thing.

In the first place, there is the general limitation, — the fact that land as a whole is limited in amount. This being granted, assume land to be of equal productivity. Under such an assumption there could be no non-competitive land groups so far as supply is concerned: rents would be equal for given areas, perfect competition being assumed. There would be but one intensive margin.

But, in fact, lands vary vastly in productivity according to situation and physical and chemical composition. There are, in the second place, then, certain particular limitations to supply. The (1) supply of lands suitable for certain products is limited, and the (2) supply obtainable from given areas of land suitable for the same product varies. That is, the supply obtainable with a given effort or investment of labor and capital varies. (Here the element of human cost must be introduced.) Accordingly there are (1) absolutely distinct groups whose supply margins will be unrelated, and (2) various margins, extensive and intensive, within these groups.

Where, by reason of the fact that the land can produce but one kind of product, it is from the supply side entirely unrelated and distinct from other land, there is no alternative use. Thus rice and corn are related as utilities satisfying food wants, but there is no direct relation between the supplies of land upon which they are produced. Such uses need no further consideration from the alternative-supply view point.

Where the supply groups are more or less closely related on the supply side, — as corn land and wheat land, or land for dwelling and factory use, — there is clearly a sort of alternative-supply use. Here the lands fall into what may be called a competitive supply group.

They may or may not be equally adaptable to the production of each of the various utilities. If they are, utility alone decides whether there are any distinct or determining alternative uses. We are thrown back upon the reasoning in our first division. But probably they are not. Then within this or that competitive supply group (*e. g.*, corn-wheat-rye land) there are various limits on supply set by costs of production on various areas, and these varying costs of production differ for different areas. One field may be able to produce more bushels of want-satisfying power in the shape of corn than of wheat with the same cost.

The supply of land for any particular use is limited, as is all land, and further by the fact that it can only be increased by taking land from some other use.

But the question is, does this fact of different relative facility of production within some potential supply group make distinct supply margins? Are the alternative-supply "uses" positive and determining or merely expressions of broader forces?

The only way to answer this question and to bring matters to some synthesis is to connect at once supply-limitation with the concept of utility already worked out. This means coming to a value or price point of view, when we can logically use the idea of *marginal* utility and of *net* returns.

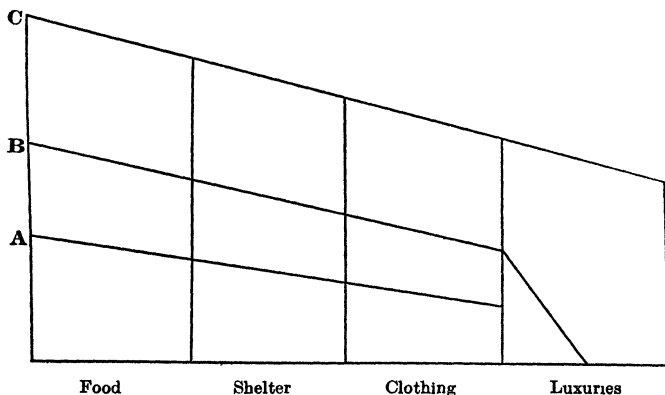
Now return for a moment to the assumption of equal competition and uniform demand and a problem in normal value. What happens then is this: in seeking to equalize the marginal utilities of goods men bring the price of each into relation with that of the other. Land which can yield utility in different concrete forms is subject to competition in the sense that it tends to be put to the use in which it yields the highest net return. The lands of the nation, of the world, even, tend to be arranged in a scale of productivity so that each acre will yield the maximum net utility. On this basis all units of land are thrown into one aggregate in that their annual values or rents are inter-related, being price-determined surplusses measured from a common no-surplus-utility margin. There would be *one* grade of land or one grade of investments upon land, so unproductive of utility that it could only satisfy the one who works and the one who waits. This land might be producing or yielding utility in the form of wheat, cotton, cranberries, or motor garages. The essential thing is that it produces no net or surplus utilities.

Here, again, the common notion of alternative use appears superficial. If rent "for agricultural purposes" is to be considered intra-marginal and positive, instead of going on to the margin from which it itself is measured to the no-rent margin for all land, it must be because the utilities yielded

by these lands are evaluated in different markets; otherwise, as price-determined surplusses, there would be a common margin. But, under the above assumption, the latter is the case.

Now if, following the previous procedure, we pass to market values, short-time conditions, and admit variations in marginal utilities and demand, the same non-competitive utility use groups appear. But we are in a position to make at least one addition as a result of bringing in supply-limiting considerations.

The utility groups distinguished above may be thought of as forming a series of vertical cleavages offering more or less obstacle to a free inter-relation of utilities and margins. Now the supply-limitation factor makes possible and necessary a grouping of wants and utilities in relation to limited supply which cuts across these vertical groups with a horizontal cleavage. For, passing from the assumption that wants are similar in quantity and quality, we note that in fact wealth is unequally distributed, which makes unequal purchasing power or "effective demand." A rough attempt to suggest the result is indicated in the following diagram. Let



A be the consumption of the poorer classes, B of the middle classes, C of the wealthy. They form market layers or strata which do not coincide.

So far as the demand for Fifth Avenue residence utility, diamond mines, game preserves, manufacturing sites for silks and luxuries of various kinds is concerned, the poor may be eliminated. Here are distinct price markets and margins.

IV

Such being the nature and occurrence of "alternative uses," does the rent of agricultural land, for example, become an "element in the cost of production of the commodities which it is employed to produce" in another use? Do alternative uses which are truly such give rise to positive, intra-marginal rents?

If by becoming an element is meant a causal or determining one, the answer is no. The price which expresses the utility yielded by building land, and from which its rent is drawn, is fixed on building land and measured from that which yields no rent. If the price fixed here so rises that agricultural land will yield greater net utility in the building group it is taken up, but *not until the higher price has been determined*.

If A is debating whether to put his lot to growing celery or build upon it, the decisive thing is the price to be expected for each utility. This determines what his gross return would be in either use. It then remains to figure on his expenses, among which he counts his rent. But the question is, not what A figures in his expenses, but *what determines this*

rent and what is its relation to the price which A has counted upon? the price which the consumer will pay? This is the more fundamental question.

The true significance of the non-competing use groups just distinguished is this: when agricultural land, for instance, goes to building use through price change it has a potential alternative use, whose effectiveness depends upon prices determined in another use market which has but an indirect connection with the former. As a result of this fact this land may pass from one use to the other. It *must*, economically speaking, whenever its net or surplus utility is greater in the other use. It then has no alternative. In the transition it affects the supply of residence or building utility, and so, indirectly, the price and the margin of such utility. Thus marginal utilities are equalized.

To sum up, from the viewpoint of marginal utility the doctrine of so-called alternative use is of limited significance in the theory of rent. It applies only in the case of lands having utilities in groups of a different order dynamically, that is, non-competitive use groups, and only operates when and where the surplus utility approaches equality in two such use groups, which approach finds expression in price changes. Land may then pass over — it must — and its rent be measured from a different and distinct margin. In so doing it affects the supply of utility yielded in the new group, and thus, indirectly, through the forces of supply and demand which determine price and margin and rent, affects price. The existence of separate margins in non-competitive land uses does not mean that land rent is the less a permanent price-determined differential.

Some practical considerations are the following:

(1) But a very small part of all the land used in agriculture has an alternative use for residence, or other purposes. (2) Once transferred from the agricultural to the residence group, land becomes so specialized as not to pass back readily, and prices and rents may fall considerably below the return to be got in agriculture before it will be devoted to farming. (3) Land frequently varies in quality within a small area, and marginal land will be found on many farms and ranches, which in turn are scattered over the country, thus, obviously, rendering practically impossible the operation of alternative uses.

So much for Mill's treatment of alternative use as a factor which causes rent to enter into prices. He makes an important exception to the sweeping statement that rent can never affect price, but does not give a very extensive application to it. We conclude that even in the cases given rent does not determine or fix price.

V

But it will be remembered that Mill makes another possible exception. He says that in certain cases, "rather conceivable than actually existing," rent which represents a scarcity value may become an element in the cost of production of the commodity which yields it.

In order to do justice to Mill it is here necessary to determine exactly what he means. Does he mean that, as Marshall points out, the extension of the cultivation of certain crops may cause a rise in the rent of land used for certain other crops to which it might have been applied? By no means. He

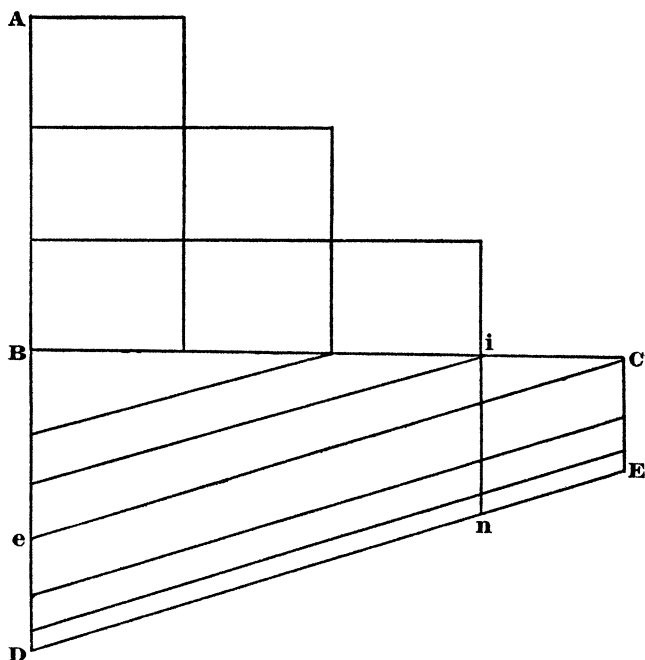
gives three illustrations of what he means: (1) In the case of mines he states that the worst mine may itself yield a rent¹ because of a sudden increase in demand. (2) In the case of fisheries, if, in the face of an increasing demand, there are no more fisheries available, "the value, doubtless, may rise to a scarcity rate, and the worst fisheries in use may then yield a considerable rent." (3) In the case of a country so fully peopled that all the lands are under cultivation while there can be no importation from other countries, land and its produce will rise to a monopoly or scarcity price, and under such circumstances Mill conceives that rent "very largely" may form a part of cost (and so enter into the determination of price).

Consider the last case first. Imagine with Mill an island so filled with people that every inch of land not necessary for dwelling and standing room is under cultivation. Under such circumstances would there be a positive, "specific" rent at the margin? The answer seems to be clearly in the negative. Mill himself defines rent as being a differential return which merely equalizes the profits of different farming capitals, by enabling the landlord to appropriate all extra gains occasioned by the superiority of natural advantages. Such being the case, as long as there are different degrees of profitableness in the employment of this agricultural capital—due to different land qualities—there will be a no-rent margin from which to measure the superiority of profitableness. We are speaking here of the entire quantity of available land considered in all its uses. In this connection a diagram may be presented with advantage.

¹ Book III, ch. v, §2.

² Book III, ch. v, §2.

Let B C in the diagram represent the amount of land in our island. It is successively taken into cultivation, until the last (or worst, rather) unit is reached, as to which unit all other units will yield a surplus. We are not for the moment considering the intensive margin, and such being the case, the last unit iC, when taken under cultivation will yield nothing over the cost of production, but the aggregate rent will be ABC. Thus far there has been no rent at the margin.



Now suppose, with Mill, that the population continues to increase and the price of food to rise. Obviously a more intensive cultivation must be resorted to. The result is the quantity, BeC. Fur-

ther increases in the demand result in a production of BDC, and the last unit, iC, produces inC. But is this a price-determining surplus? So Mill states.

It seems that Mill is in error. He is right in holding that the marginal unit of land (iC) may, from the extensive standpoint, yield a rent; but he is wrong in inferring that this rent enters into price. The rent arising on the poorest land in cultivation is in its turn simply a differential return to a more profitable investment of labor and capital as compared with the least profitable application which the increasing demand has made necessary.

We may speak of two margins: the extensive and the intensive margins.¹ BC represents the former; DE, the latter. Mill seems to think that the product arising below the extensive margin, *i. e.*, BCD, is a cost and enters into the fixation of prices, or at least that is the logical outcome of his statement that the rent on the unit that was the extensive margin will enter into price. But the fallacy of the position is apparent. With the growth of population on the island we are merely driven from one margin to another, — from a vertical extensive margin to a horizontal intensive margin, — and this is true not only for the land as a whole, but for that part of it (iC) that was on the extensive margin.

The two other cases in which Mill leaves the inference that on account of scarcity positive price-entering rents may exist at the margin, may be criticised in a similar manner. If the rise in price is temporary, it results in what may best be called

¹ See Prof. Hollander's article on "The Concept of Marginal Rent" published in this Journal, January, 1895.

pure profits; if it lasts, there is a new and lower margin. In any case, the rise is price-determined.

In his *Economics of Distribution* Hobson supposes¹ a case like Mill's and concludes that "the worst land in use may or must pay an actual rent. This will not be a differential rent, but a forced or scarcity rent." This statement is unsound for the same reason which invalidates Mill's reasoning, and Hobson's whole argument is vitiated by a false separatism in not considering together the extensive and the intensive margins. He is inconsistent, too, in that he seems to forget his own insistence on "land use" rather than land acres as a basis of payment for land. While it is true that a rent may arise on the poorest unit of land area, there is a no-rent land-use. Here lies the significance of the intensive margin.

A somewhat different phase of the same fallacy is apparent in a recent article published in these columns. The writer says, "Where monopoly power of any kind exists, absolute intensive marginal rents will appear. These rents will enter price as do wages and interest. . . ." ² The reasoning seems to be based on the idea that a "normal flow" of labor and capital is obstructed thus causing an intensive margin "which is actually higher than that of land employed in other enterprises." But does the fact of a higher intensive margin — assuming it to be true — mean a positive rent at that margin? — one which enters price? Not if the reasoning of this paper is sound. Nor does the article referred to show how a higher intensive margin

¹ p. 120.

² Quarterly Journal of Economics, August, 1906, p. 606. Relation of Marginal Rents to Price, by F. T. Carlton.

causes "absolute marginal rents." It might as well be argued that because a poor farmer may not work his land with sufficient capital, — and whose intensive margin is consequently higher than his better equipped neighbor's, — intra-marginal rent appears upon his land, and enters the price of his produce.

It is probable that Mill fell into error partly through a loose use of terms. His language is inconsistent. He first defines rent as a surplus over cost of production, and states that it is the result of the sale of commodities whose value "is not, correctly speaking, a scarcity value." How then can he consistently say, "A commodity may . . . yield a rent even under the most disadvantageous circumstances of its production; . . . when it is . . . selling at a scarcity value?"¹

Again, it will be remembered that Mill used the phrase "cost of production" rather than the word "price," saying that rent is an element in the cost of production of the commodity which yields it in certain cases² where it represents a scarcity value. But how can a return which is a surplus above the cost of production enter into the determination of that cost? It might be possible at least to argue the statement that such a surplus entered into "*price*," but that it should largely determine that quantity to which it is a surplus is inconceivable.

It would seem that Mill has in mind what are really two different classes of surplus, both of which he calls rent; but one of which is profits. On the one hand he defines rent as a differential which is not a result of scarcity value, but of the "circumstances

¹ See Book III, ch v, §§2, and 4.

² Book III, ch vi, §9.

of production." On the other hand he says a rent may result at the margin from an increase in demand relative to the supply, — *i. e.*, from scarcity. These ideas are in contradiction, and the latter kind of "rent," so-called, is really pure profits.

LEWIS H. HANEY.

UNIVERSITY OF TEXAS.